



**Report to the Secretary of Defense**

**Assessing DoD's Study  
Information Gap: Optimizing  
the Electronic Management  
of DoD-Related Studies**

**Report FY10-09**

- **Recommendations for a Comprehensive Knowledge Management System for DoD Officials that Facilitate Information Retrieval and Analysis of all DoD-funded and DoD-related studies**

## Report Documentation Page

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# Optimizing the Electronic Management of DoD-Related Studies

## TASK

The Chairman, Defense Business Board (DBB) formed a Task Group to review the existing processes used for the collection, storage, and retrieval of both DoD-sponsored and DoD-related studies and to propose a new method to optimize sharing, research, and collaboration of this material. The Task Group also considered the challenges associated with managing such a process and how the Department might implement, institutionalize, and publicize a system for studies management. Factors to optimize the retrieval of past studies as well as current studies and links to other related information were to be considered. A copy of the official Terms of Reference (TOR) outlining the scope and deliverables for the Task Group can be found at **Appendix A**.

The Task Group was chaired by Atul Vashistha. Other Task Group members included: James Kimsey, Lon Levin, Kevin Walker, and Leigh Warner. The Task Group Executive Secretary was Captain Michael Bohn, USN.

## PROCESS

The Task Group conducted interviews and elicited comments from both private sector and DoD knowledge management leadership.

Additionally, the Task Group reviewed DoD directives, instructions, and online resources.

The Task Group presented their findings and recommendations to the full Board on April 22, 2010 (**see Appendix B**).

## FINDINGS

The number of and amount spent on studies each year within the Federal government, and DoD in particular, is enormous. The total dollars for federally funded studies in FY2009 was \$3.3B not including \$62B on research and development. Within OSD, and only considering studies conducted by Federally Funded Research and Development Centers (FFRDCs), OSD spent \$240 Million on 758 Custom Studies in FY2009.

## **Defense Business Board**

Furthermore, no comprehensive and systematic collection, storage, and retrieval system exists to provide “one stop shopping” knowledge management of DoD-funded studies, US Government-funded studies, commercial information, and open source analyses with relevance to DoD.

The largest current repository of DoD-funded studies resides within the Defense Technical Information Center (DTIC) located within the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. However, the DTIC search capability is limited and stovepiped. There are many private sector best practices that can enhance DoD’s knowledge management.

Specific details of the findings are provided in **Appendix B**.

## **RECOMMENDATIONS**

Based on the Task Group’s research, findings, and analysis the following three overarching recommendations are provided:

1. All DoD-funded and DoD-related studies should be required to be submitted to a central repository.
2. The Deputy Secretary of Defense should officially designate an electronic Defense Knowledge Management repository for all DoD-funded studies and DoD-related studies.
3. Launch a DoD-wide knowledge portal on the foundation of DTIC with a potential re-naming of the system to “Athena” that more accurately reflects the broad knowledge management mission beyond technical documents.

Specific details of the recommendations are provided in **Appendix B**.

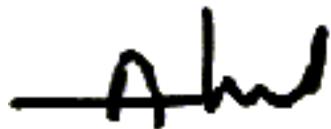
## **CONCLUSION**

The Department's electronic management of DoD-related studies is fundamental to ensuring optimal use of previous and current studies and the most efficient and effective use of scarce resources.

The Board urges DoD to consider the Task Group's findings and implement its recommendations.

Respectfully submitted,

Mr. Atul Vashistha

A handwritten signature in black ink, appearing to read "Atul Vashistha".

Task Group Chair

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**Defense Business Board**

**APPENDIX A**

**TERMS OF REFERENCE**

**Defense Business Board**

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DEFENSE  
BUSINESS  
BOARD

DEFENSE BUSINESS BOARD  
1155 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1155

08 March 2010

MEMORANDUM FOR ATUL VASHISTHA, DEFENSE BUSINESS BOARD

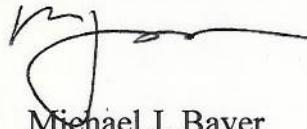
SUBJECT: Terms of Reference – “Optimizing the Electronic Management of DoD-Related Studies”

The Department of Defense, along with other Federal and non-Federal agencies, annually invests a large amount of time and effort in government related studies and analysis. However, there is currently no system available that hosts all these studies and enables users and senior Department officials to easily retrieve and compare or contrast the recommendations or analysis within this information. In order to help the Department efficiently and effectively use the myriad of studies from public and private sources, I request you form a Task Group to provide recommendations to the Department on optimizing the management of studies.

Please review the existing processes that are in use for the collection, storage, and retrieval of DoD sponsored and DoD related studies and propose a new method to optimize sharing, research, and collaboration of this material. Consider the challenges associated with managing such a process and how the Department might implement, institutionalize, and publicize a system for studies management. Also, consider what factors must be considered to optimize the retrieval of past studies as well as current studies and links to other related information.

Atul will serve as Chair with support from James Kimsey, Lon Levin, Kevin Walker, and Leigh Warner. The Group should plan to present draft recommendations to the Board at the April 2010 meeting. CAPT Michael Bohn, USN from the DBB staff, will serve as the Secretariat Representative.

As a subcommittee of the Board, and pursuant to the Federal Advisory Committee Act of 1972, the Government in the Sunshine Act of 1976, and other appropriate federal regulations, this Task Group shall not work independently of the Board's charter and shall report its recommendations to the full Board's public deliberation. The Task Group does not have the authority to make decisions on behalf of the Board, nor can it report directly to any federal officer who is not also a Board member. The Task Group will avoid discussing “particular matters” according to Section 208 of Title 18, U.S. Code.



Michael J. Bayer  
Chairman



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**Defense Business Board**

**APPENDIX B**

**FINDINGS AND RECOMMENDATIONS PRESENTED  
TO THE FULL BOARD ON APRIL 22, 2010**

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DEFENSE BUSINESS BOARD



Optimizing the  
Electronic  
Management  
of DoD-Related Studies  
Task Group

April 22, 2010

# Task Group Overview

## Terms of Reference

Currently, there is no comprehensive “knowledge management system” available to DoD officials that facilitates information retrieval and analysis of all DoD-funded and DoD-related study recommendations, rationale, and associated supporting data. In order to help the Department efficiently and effectively use the myriad of DoD-related studies, request you form a task group to provide recommendations to the Department on optimizing the management of DoD-related studies.

## Deliverables

Review the existing processes used for the collection, storage, and retrieval of both DoD-sponsored and DoD-related studies and propose a new method to optimize sharing, research, and collaboration of past and current studies. Consider the challenges associated with managing such a process and how the Department might implement, institutionalize, and publicize a system for studies management. Also, think about what factors must be considered to optimize the retrieval of past studies as well as current studies and links to other related information.

## Task Group

Mr. Atul Vashistha (Chair)

Mr. James Kimsey

Mr. Lon Levin

Mr. Kevin Walker

Ms. Leigh Warner

## Military Assistant

Captain Michael Bohn, USN



# Process

- The Task Group conducted interviews/elicited comments from both private sector and DoD knowledge management leadership
- Private Sector
  - IBM
  - Case Central
  - Google
  - Yahoo
  - Microsoft
- DoD
  - Acquisition, Technology, and Logistics (AT&L), Office of OSD Studies and Federally Funded Research and Development Centers (FFRDC) Programs
  - Director Defense Research and Engineering (DDR&E), Defense Technical Information Center (DTIC)
  - Joint Staff J6 - Net Centric Capability
  - OSD Chief Information Office
  - Navy Knowledge Online
- Reviewed
  - Department of Defense Instruction 3200.14 change 3, June 28, 2001 “Principles and Operational Parameters of the DoD Scientific and Technical Information Program”
  - Department of Defense Directive 3200.12, February 11, 1998 “DoD Scientific and Technical Information (STI) Program (STIP)”
  - DTIC website, Navy Knowledge Online, Center for Army Lessons Learned (CALL Public Digital Library), Stability Operations Lessons Learned Information Management System



# Findings

- “DoD-funded Studies” included classified, FOUO, and unclassified research efforts conducted on behalf of OSD, Joint Staff, Services, FFRDCs, and national labs
  - “US Government(USG)-funded Studies” are conducted on behalf of USG, including interagency and Congress
  - “Commercial Information” is private intellectual property, available under contract
  - “Open Source Analyses” included published works by foreign militaries, think tanks, independent scholars, media, and other sources
- Number of Studies
  - Considering only studies conducted by FFRDCs, OSD spent \$240 Million on 758 Custom Studies in FY2009

	RAND NDRI	RAND Arroyo	RAND Project Air Force	Center for Naval Analysis	IDA
<b>Number of Reports</b>					
FY09	126	66	60	204	302
FY08	117	60	55	213	275
FY07	101	74	50	221	248
<b>Cost of Reports</b>					
FY09	\$40.8M	\$31.1M	\$43.3M	\$24.8M	\$100.5M
FY08	\$37.3M	\$28.1M	\$41.9M	\$20.4M	\$93.8M
FY07	\$35.4M	\$28.0M	\$40.1M	\$20.9M	\$92.3M

- Total dollars spent for all Federally funded studies in FY2009 were \$3.3B not including \$62B on R&D\*

\* Source: Federal Times article “FEDLIST Studies and analyses” March 22, 2010 and USASpending.gov



# Findings

- No comprehensive and systematic collection, storage, and retrieval systems exist for DoD-funded studies, USG-funded studies, commercial information, and open-source analyses with relevance to DoD
  - Potentially results in repetitive efforts since studies may already exist
    - Example: The Defense Acquisition Performance Assessment Report from January 2006 cites 128 acquisition studies previously conducted
- Largest current repository of DoD-funded studies is DDR&E's Defense Technical Information Center
  - Established in 1945 and contains over 2M documents beginning in 1890s
  - Chartered to provide centralized operation of DoD services for the acquisition, storage, retrieval, and dissemination of Scientific and Technical Information. Reports and studies include classified and unclassified
  - Despite mandatory Directives, few studies are consistently submitted to DTIC
  - IDA and CNA studies are not released unless approved by the study sponsor
  - The three RAND FFRDCs (NDRI, Arroyo, and Project Air Force) put unclassified studies on their web site after DoD public release process
  - Web page requests on DTIC have increased approximately 12% during FY2010 YTD vs. the same period in FY2009



# Findings

- DTIC search capability is limited and stovepiped
  - Lack of taxonomy sub-optimizes search results
  - Studies are not standardized for formatting, metadata tagging, etc.
  - No DoD-wide registry exists for “Studies in Progress” to facilitate real-time collaboration
  - Search criteria is limited to searching abstract only and does not search entire document
  - Access-control/security clearances are legitimate reasons for limited access
- No central repositories within the Services
  - Service specific sites for general information for service members
    - Navy Knowledge Online
    - Army Knowledge Online
    - Air Force Portal



# Findings

- Private Sector Best Practices
  - Leverage publicly available taxonomy
  - Searches not only words, but also intelligent groupings of documents which a search algorithm does on behalf of the user
  - Additional technology to protect confidentiality as well as tier access
  - Ability to plug and play new search algorithms to continue to evolve accuracy of searches
  - No limitation on number of documents that can be indexed. Search results point to a particular page and section in the document
  - A synonym dictionary is standard and an industry specific one is important only in highly technical situations
  - Commercially available search applications are typically leveraged instead of custom solutions



# Recommendations

1. Require submission of all DoD-funded studies to a central repository
  - Update and re-promulgate Deputy Secretary of Defense Policy Document that enforces submission of all DoD-funded reports
  - For tracking purposes, require initiators of all DoD-funded studies to register for a DoD study number at the time of contract award (similar to Library of Congress assignment of a copyright)
    - Establish monitoring/enforcement mechanism, with penalties such as final payment withholding
    - Designate central contact to track status of all DoD-funded “New Studies Underway”
  - Require Terms of Reference (TOR)/scope of work for new studies to include
    - Discussion of why prior DoD-studies are insufficient
    - The links to all studies and reports identified during new study TOR/scope of work development



# Recommendations

2. Deputy Secretary of Defense to designate an electronic defense knowledge management repository for all DoD-funded and DoD-related studies
  - Suggest DoD leadership build upon current DTIC capabilities
  - Sufficiently resource DTIC to achieve a central repository
  - Select a commercial provider of ongoing and updated search algorithms
  - Ensure the ability to pull from full text (efforts in progress by DTIC) and not just abstracts
  - Establish and codify a taxonomy for proper input of studies in the system to facilitate improved searches
  - Review and implement existing commercial standards to enhance current DTIC text/data retrieval and comparison
  - Add a provision to regularly update algorithms to enhance search results
  - Conduct a business case to identify one-time costs and ongoing costs to enable the above enhancements



# Recommendations

3. Launch a DoD-wide knowledge portal using DTIC as the foundation
  - Establish new mission to manage DoD-related knowledge beyond the “scientific, technical, and engineering” emphasis of the DTIC name
  - Consider naming this DoD-wide knowledge portal “ATHENA”
    - Goddess of wisdom and strategic side of war, Athena preferred using wisdom to resolve conflicts
    - Use nomenclature like THOMAS.gov search engine at the Library of Congress
    - Consider maintaining DTIC name for the technical portal of ATHENA
  - Build awareness of “ATHENA” as the central resource for both DoD-funded and DoD-related documents



# Recommendations

- Deputy Secretary of Defense to issue additional directive
  - Expanded “ATHENA” system be searched prior to initiation of new studies and rationale be provided as to why prior related studies are insufficient
  - All new studies are required to include references to previous DoD-funded and DoD-related studies and all studies not appearing on “ATHENA” must be forwarded to populate the database
  - A designated officer be named to track all “New Studies in Progress”
- Assign “ATHENA” team members to interface with OSD, Joint Staff, Services, Defense Agencies, DoD Advisory Boards, and other organizations to build a client base of motivated users and collaborators who facilitate submission of studies
- Preliminary implementation view: 6-month project with 10-15 engineers



# Outbriefs

- Mr. William J. Lynn, Deputy Secretary of Defense
- Dr. Ashton B. Carter, Under Secretary of Defense for Acquisition, Technology & Logistics
- Mr. Zachary J. Lemnios, Director of Defense Research and Engineering



## DEFENSE BUSINESS BOARD



Questions?

DEFENSE BUSINESS BOARD

*Business Excellence In Defense of the Nation*

# DEFENSE BUSINESS BOARD



## APPENDIX

# DEFENSE BUSINESS BOARD

*Business Excellence In Defense of the Nation*

# Federal Contracts for Special Studies and Analysis

## Summary

Fiscal Year: 2009

Total dollars: \$3,310,743,067

The amount for this search is 0.6% of all awarded dollars for the fiscal year.

Total number of contractors: 4,190

Total number of transactions: 19,837

The data excludes more than \$62B in spending on research and development, primarily defense and space science projects

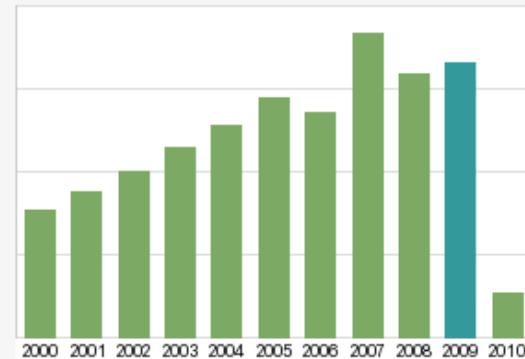
## Top 5 Products or Services Sold

Other Special Studies and Analyses	\$886,554,194
Technology Studies	\$722,237,616
Defense Studies	\$431,611,531
Medical and Health Studies	\$327,090,200
Environmental Studies and Assessments	\$275,569,208

## Top 5 Contracting Agencies Purchasing from Contractor(s)

NAVY, Department of the	\$947,334,129
ARMY, Department of the (except Corps of Engineers Civil Program Financing)	\$652,601,635
AIR FORCE, Department of the (Headquarters, USAF)	\$518,617,135
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	\$357,228,515
EDUCATION, Department of	\$165,900,733

## Trend



2000	\$1,528,205,449
2001	\$1,745,256,393
2002	\$2,005,334,739
2003	\$2,293,939,561
2004	\$2,551,421,956
2005	\$2,882,192,020
2006	\$2,719,930,619
2007	\$3,658,052,948
2008	\$3,186,297,771
2009	\$3,310,743,067
2010	\$540,160,483



# DTIC Selection Content Criteria

Documents received by DTIC are evaluated for pertinence and timeliness of their contents. Relevance to DoD research and engineering and studies activities such as Research, Development, Testing and Evaluation (RDT&E) is essential. Acceptance of DoD documents is normal procedure, but the suitability of non-DoD documents may require detailed comparison with selection objectives to justify accession. In accordance with DoD Instruction 3200.14 (May 13, 1997) DTIC selects documents that include, but are not limited to, the examples listed below. Exceptions may be made to items on these lists, based on overall evaluation against the selection criteria, and if necessary a review by committee.

## General Criteria for Selection

- Relevance to DoD Technical Concerns
- Scientific and Technical Content
- Funding Sources
- Security Classification
- Release Limitations
- Intended Use
- Usefulness
- Permanency of Value
- Reproducibility
- Completeness of Data
- Extent of Activity
- Specific Projects
- Special Arrangements
- Precedents
- Type of Document

## Examples of Document Types Selected

- Acquisition Life Cycle Documents, e.g.:
  - Acquisition Decision Memoranda (ADM)
  - Initial Capabilities Document (ICD)
  - Capability Development Document (CDD)
  - Capability Production Document (CPD)
  - System Threat Assessments
  - Test & Evaluation Master Plans (TEMP)
- Annual Reports from the DoD Labs
- Bibliographies
- Briefings (DoD-related), e.g.:
  - Advanced Briefings to Industry (ABI)
  - Command Histories
  - Conference Proceedings & Papers
- Congressional Documents (DoD-related), e.g.:
  - Congressional Budget Office (CBO) Documents
  - Congressional Research Service (CRS) Reports
  - Government Accounting Office (GAO) Reports & Testimonies
- Dissertations & Theses
- DoD Directives, Regulations & Instructions
- DoD Functional Area Dictionaries/Glossaries
- DoD Manpower Estimates
- Federally Funded Research & Development Center (FFRDC) Reports
- Inspector General (IG) Audits (DoD-related)
- Journal Articles & Reprints (DoD-supported)
- Lessons Learned (DoD-related)
- Mission Area Plans
- Modernization Planning Documents
- NATO Research and Technology Organization (RTO) Documents, Meeting minutes and Announcements
- Newsletters (DoD-related)
- Patents & Patent Applications (DoD-related)
- Planning, Programming & Budgeting System (PPBS) Documents, e.g.:
  - Budget Estimate Submissions (BES)
  - Chairman Program Assessments (CPA)
  - Defense Planning Guidance (DPG)
  - Issue Books
  - National Military Strategy Documents (NMSD)
  - Program Budget Decisions (PBD)
  - Program Decision Memoranda (PDM)
  - Program Objective Memoranda (POM)

Source: DTIC online – access controlled site:

<https://www.dtic.mil/> [home](#) » [submit](#) » [guidance](#) » [criteria](#)



# DTIC Users and Web Page Requests

## Registered Users

New Registered Users	FY09	Oct	Nov	Dec	Jan	Feb	Total
		946	724	453	391	428	2,942
	FY10	Oct	Nov	Dec	Jan	Feb	Total
		771	660	968	3,785	3,263	9,447
	% of Chg	-18.5%	-8.8%	113.7%	868.0%	662.4%	221.1%

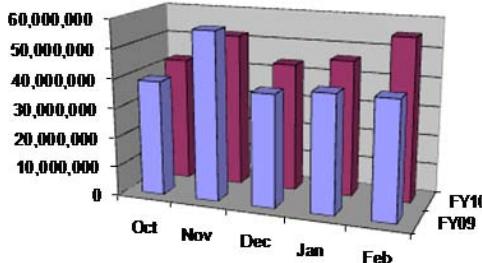
## Total Active Users

Total Active Users	FY09	Oct	Nov	Dec	Jan	Feb	Total
		18,129	18,762	19,021	24,608	25,457	N/A
	FY10	Oct	Nov	Dec	Jan	Feb	Total
		35,436	29,038	29,882	33,626	35,721	N/A
	% of Chg	95.5%	54.8%	57.1%	36.6%	40.3%	N/A

## Requests

Total Web Page Requests	FY09	Oct	Nov	Dec	Jan	Feb	Total
		39,021,816	57,090,759	38,132,672	39,971,456	39,964,468	214,181,171
	FY10	Oct	Nov	Dec	Jan	Feb	Total
		42,382,037	52,095,404	43,610,132	46,268,748	55,260,240	239,616,561
	% of Chg	8.6%	-8.7%	14.4%	15.8%	38.3%	11.9%

Web Page Requests



- FY09 Total: 214,181,171
- FY10 Total: 239,616,561
- Percent of Change: 11.9%



# Federally Funded Research and Development Centers – Page 1

Sponsor	Sponsor Agency	FFRDC	Administrator	Administrator Type
Department of Defense	Office of the Secretary of Defense	Studies and Analyses Center	Institute for Defense Analyses, Alexandria, VA	Other nonprofit institutions
Department of Defense	Office of the Secretary of Defense	National Defense Research Institute	RAND Corp., Santa Monica, CA	Other nonprofit institutions
Department of Defense	Office of the Secretary of Defense	C3I Federally Funded Research & Development Center	MITRE Corp., Bedford, MA and McLean, VA	Other nonprofit institutions
Department of Defense	National Security Agency	Centers for Communications and Computing	Institute for Defense Analyses, Alexandria, VA	Other nonprofit institutions
Department of Defense	Department of the Navy	Center for Naval Analyses	The CNA Corporation, Alexandria, VA	Other nonprofit institutions
Department of Defense	Department of the Air Force	Lincoln Laboratory	Massachusetts Institute of Technology, Lexington, MA	Universities and colleges
Department of Defense	Department of the Air Force	Aerospace Federally Funded Research and Development Center	The Aerospace Corporation, El Segundo, CA	Other nonprofit institutions
Department of Defense	Department of the Air Force	Project Air Force	RAND Corp., Santa Monica, CA	Other nonprofit institutions
Department of Defense	Department of the Army	Software Engineering Institute	Carnegie Mellon University, Pittsburgh, PA	Universities and colleges
Department of Defense	Department of the Army	Arroyo Center	RAND Corp., Santa Monica, CA	Other nonprofit institutions
Department of Energy	None	Idaho National Engineering and Environmental Laboratory	Battelle Energy Alliance, LLC, Idaho Falls, ID	Industrial firms
Department of Energy	None	Sandia National Laboratories	Sandia Corporation, a subsidiary of Lockheed Martin Corp., Albuquerque, NM	Industrial firms
Department of Energy	None	Savannah River Technology Center	Westinghouse Savannah River Co., Aiken, SC	Industrial firms
Department of Energy	None	Ames Laboratory	Iowa State University of Science and Technology, Ames, IA	Universities and colleges
Department of Energy	None	Argonne National Laboratory	University of Chicago, Argonne, IL	Universities and colleges
Department of Energy	None	Ernest Orlando Lawrence Berkeley National Laboratory	University of California, Berkeley, CA	Universities and colleges
Department of Energy	None	Fermi National Accelerator Laboratory	Universities Research Association, Inc., Batavia, IL	Universities and colleges
Department of Energy	None	Lawrence Livermore National Laboratory	University of California, Livermore, CA	Universities and colleges
Department of Energy	None	Los Alamos National Laboratory	University of California, Los Alamos, NM	Universities and colleges
Department of Energy	None	Princeton Plasma Physics Laboratory	Princeton University, Princeton, NJ	Universities and colleges
Department of Energy	None	Stanford Linear Accelerator Center	Leland Stanford, Jr., University, Stanford, CA	Universities and colleges



# Federally Funded Research and Development Centers – Page 2

Sponsor	Sponsor Agency	FFRDC	Administrator	Administrator Type
Department of Energy	None	Thomas Jefferson National Accelerator Facility	Southeastern Universities Research Association, Inc., Newport News, VA	Universities and colleges
Department of Energy	None	Brookhaven National Laboratory	Brookhaven Science Associates, Inc., Upton, Long Island, NY	Other nonprofit institutions
Department of Energy	None	National Renewable Energy Laboratory	Midwest Research Institute, Battelle Memorial Institute, Bechtel National, Inc., Golden, CO	Other nonprofit institutions
Department of Energy	None	Oak Ridge National Laboratory	UT-Battelle, LLC, Oak Ridge, TN	Other nonprofit institutions
Department of Energy	None	Pacific Northwest National Laboratory	Battelle Memorial Institute, Richland, WA	Other nonprofit institutions
Department of Health and Human Services	National Institutes of Health	National Cancer Institute at Frederick	SAIC-Frederick Inc. Frederick, MD	Other nonprofit institutions
Department of Homeland Security	Under Secretary for Science & Technology	Homeland Security Institute	Analytic Services, Inc., Arlington, VA	Other nonprofit institutions
Department of Homeland Security	Under Secretary for Science & Technology	Homeland Security Systems Engineering and Development Institute	MITRE Corp. Mclean, VA	Other nonprofit institutions
Department of Homeland Security	Under Secretary for Science & Technology	National Biodefense Analysis & Countermeasures Center	Battelle National Biodefense Institute, Frederick MD	Other nonprofit institutions
National Aeronautics and Space Administration	None	Jet Propulsion Laboratory	California Institute of Technology, Pasadena, CA	Universities and colleges
National Science Foundation	None	National Astronomy and Ionosphere Center	Cornell University, Arecibo, PR	Universities and colleges
National Science Foundation	None	National Center for Atmospheric Research	University Corporation for Atmospheric Research, Boulder, CO	Universities and colleges
National Science Foundation	None	National Optical Astronomy Observatories	Association of Universities for Research in Astronomy, Inc., Tucson, AZ	Universities and colleges
National Science Foundation	None	National Radio Astronomy Observatory	Associated Universities, Inc., Green Bank, WV	Universities and colleges
National Science Foundation	None	Science and Technology Policy Institute	Institute for Defense Analyses, Alexandria, VA	Other nonprofit institutions
Nuclear Regulatory Commission	None	Center for Nuclear Waste Regulatory Analyses	Southwest Research Institute, San Antonio, TX	Other nonprofit institutions
Department of the Treasury	Internal Revenue Service	Internal Revenue Service (IRS) Federally Funded Research and Development Center	MITRE Corp., Center for Enterprise Modernization, McLean, VA	Other nonprofit institutions
Department of Transportation	Federal Aviation Administration	Center for Advanced Aviation System Development	MITRE Corp., McLean, VA	Other nonprofit institutions

